UPHOLSTERED FURNITURE
PUBLIC MEETING JUNE 18-19, 2002

PRELIMINARY AGENDA

Tuesday, June 18

Morning session: 10:00 - 12:00

--Welcome & Opening Remarks: J. Elder, D. Ray
--National Ass'n. of State Fire Marshals: D. Bliss
--California Bureau of Home Furnishings: J. McCormack
--American Furniture Mfrs. Ass'n.: A. Counts
--Upholstered Furniture Action Council: J. Ziolkowski

Afternoon session: 2:00 - 4:00

--Alliance for the Polyurethanes Industry: K. Reimann, A. Grand
--National Cotton Council: P. Wakelyn
--Fire Retardant Chemicals Association: W. Horn
--Akzo-Nobel Chemical Co.: W. Gentit

Wednesday, June 19

Morning session: 9:00 - 12:00

--American Textile Mfrs. Ass'n.: P. Adair, H. Truslow
    -Quaker Fabrics of Fall River: D. Pettey
    -Weave, Inc.: R. Berkley
--Joan / Mastercraft Fabrics: L. Tomerlin
--Culp, Inc.: D. Bell

Afternoon session 1:00 - 3:00 (if necessary)

--McKinnon-Land Fabric Co.: F. Land
--INDA, Ass'n. of the Nonwovens Industry: C. Comelia
--Decorative Fabrics Ass'n.
    -Calico Corners, Inc.: J. Jessup
    -Kravet, Inc.: C. Kravet
    -Covington Industries, Inc.: R. Gilmartin

Statement of Donald P. Bliss
National Association of State Fire Marshals
US Consumer Product Safety Commission Public Meeting
Regulatory Options for Addressing Upholstered Furniture Flammability
June 18, 2002

Commissioners and Commission staff, my name is Donald Bliss. I am vice president of the National Association of State Fire Marshals, and Director of Fire Safety & Emergency Management as well as State Fire Marshal for New Hampshire. Our Association represents the most senior fire official of each of the 50 states and District of Columbia. Our mission is to protect people, property and the environment from fire. We thank you for this opportunity to address the Commission and staff on upholstered furniture fire safety standards.

We are past the point where there is any useful purpose in discussing the number or severity of fires involving upholstered furniture. We are past the point where there is much doubt that we soon will see mandatory, national standards for these products.

But, we are very much at the point where serious people are deciding exactly what the standard should be. I do not want to gloss over this point. We deeply appreciate the efforts of the American Furniture Manufacturers Association, the American Plastics Council, the California Bureau of Home Furnishings, many individual furniture and materials producers, and the Commission staff for all that has been done to bring clarity and purpose to this important matter. I wish to express special thanks to Dale Ray – the unsung hero of this entire process. He has worked against the toughest of odds, and we are sincere in our appreciation of his commitment to get this right.

In our view, this discussion has two parts.

First, a standard must be effective. Effectiveness begins with understanding the kinds of fire losses we are attempting to prevent. The second factor is the practicality of the standard. A standard cannot be so burdensome or difficult that it creates confusion or invites cheating. A practical, fair standard guarantees high levels of compliance and low enforcement costs.

An effective standard begins with the recognition that upholstered furniture often represents the most significant fuel load in a room. In a bedroom, a mattress may represent a greater fuel load – and we are addressing mattresses in an equally serious fashion. An upholstered chair may ignite from a cigarette, a candle, a child with a lighter, a defective extension cord or a space heater. NASFM is working to reduce the

risk from every one of these ignition sources. Whatever the source, a covering material of some sort is the first to ignite, then perhaps various layers of material and padding, and finally filling materials. Some of the materials currently in use pose little concern, some naturally resist fire or restrain flame spread, others present serious problems, and some should not be used at all.

Because of the range of potential ignition sources and the variety of materials used in upholstered furniture, the absolute prevention of all upholstered furniture fires is not a realistic goal. However, the prevention of *major* fires involving upholstered furniture is realistic and must be our first priority. Therefore, as we have stated in the past, NASFM is against the use of any filling material that is easily ignited and capable, by itself, of bringing a room to flashover. We do not agree that encasing such highly combustible materials in a fire resistant barrier is an effective approach, any more than it would make sense to place a bladder of gasoline inside a fire resistant covering in a couch. Some filling materials currently in use are as dangerous as gasoline.

Fire prevention is dependent on redundancy. Barriers can and should be part of a fire protection system – but they are not an answer in and of themselves.

Covering materials and any materials between the cover and the filling are a second concern because they are ignited first and may spread fire or expose the filling materials. Some of those materials represent solutions, some are serious problems. Some are tough to ignite, some melt, some burn furiously. It should come down to performance alone.

We do not expect a couch to withstand a bolt of lightning, but it is reasonable for a family to expect that their living room sofa can resist ignition and propagation from a cigarette, a candle, a bad extension cord, or a kid with a lighter.

With a bit more work, the new California Technical Bulletin 117 will be an effective standard and one that we expect to support. The United Kingdom has reported very significant loss reductions since adopting its upholstered furniture flammability standards. The Commission's own draft standard – with the addition of a requirement for filling materials – is not too far off the mark. We appreciate the American Furniture Manufacturers Association's recent request that the draft standards include filling materials.

Any of these standards, when taken in combination with mandatory requirements for lower ignition propensity cigarettes and safer candles, will result in far fewer fatal upholstered furniture fires, and a sustained decrease in the overall number of upholstered furniture fires. Later this year, we will be part of a coalition that will select one of these standards for inclusion in federal legislation. Obviously, the Commission has the authority to act whenever it chooses.

But, effectiveness alone is not the answer. A standard must be practical.

Any of the standards can be met at some cost. Competition will make the solutions affordable. The American Furniture Manufacturers Association has asked for far more information on the new technologies coming forth. We endorse that request.

We have been briefed on one technology that will improve the fire performance of virtually any fiber, another technology that looks like it might provide protection against a forest fire, and a wide range of barrier materials – some of which stop bullets. A number of effective back-coatings and other treatments already exist. This September, the California Fire Chiefs Association will host a Fire Safety Technologies Showcase, and encourage all of the players to put their cards on the table. Let the competition begin.

At the same time, let's try to keep the regulation itself as free of unnecessary burdens as possible.

We in the public sector must recognize that some furniture producers offer an almost unlimited range of products, while others offer relatively few choices. Some manufacturers can accommodate composite tests, others cannot. Some manufacturers want their material suppliers to provide solutions. Other manufacturers may prefer to address the issues themselves. If safety is the goal, why have standards that favor one economic model over another? Why make it tough to comply?

The California Bureau of Home Furnishings has told us it plans to confront the issue of practicality head-on by asking industry and fire code enforcers for ideas. The Bureau's efforts may result in a menu of regulatory options, or some new approach altogether.

Finally, if we are to be practical, we cannot be in the business of having one branch of government require something, if another branch of government forbids it. At the crux of this issue is the controversy over flame retardant chemicals, which has become manic and ridiculously political. But there is no conflict between fire safety and environmental authorities.

I personally know and have met many times with the Swedish scientists and regulators who have studied these issues for longer than anyone else. We have been in regular contact with the US Environmental Protection Agency, and the European Commission's Environmental Directorate.

None of them condemns *all* flame retardant chemicals. None of them is even against entire categories of FR chemicals. Each of these chemicals is regulated, and can be restricted or banned if necessary. Our own National Academy of Sciences had no problem, from the perspective of human health, with the use of eight of these substances.

A few people think that it is clever to pit environmentalists and fire safety officials against each other to slow work on furniture fire safety standards. For the record, our friends in the environmental community and we are of one mind. If a flame retardant

chemical is bad, it shouldn't be sold. If it is acceptable, then it can help us save lives. I have never so much as heard of a child harmed by exposure to these compounds, and I don't want to see even one case – but I regularly read reports of children who might have lived if more attention had been paid to fire safety. We need common sense, not hysterics here.

The good news is that common sense is prevailing. We will have mandatory, practical, effective national fire safety standards very soon. Lives will be saved, property will be protected, furniture manufacturers will be able to focus on what they do best, innovative new materials will come forward, and Americans will say thanks to the many serious people who quietly got the job done.

California Technical Bulletin 117 Standard Revision Update

John McCormack, R/D Manager

U.S. Consumer Product Safety Commission Meeting-

Upholstered Furniture Flammability Options

C.P.S.C. Headquarters

4330 East West Highway

Bethesda, MD. (June 18, 19, 2002)

117 Revision-Guiding Principles

- Safer furniture for California consumers with resulting reductions in numbers and rates of deaths, injuries and property losses related to upholstered furniture fires.
- Standard and enforcement policies will be based on sound science, best practices and adequate and reliable data.
- Standard will be effective.

Key Elements of Revised T.B. 117 Standard

- Maintain and improve small/bench-scale component standards; allows supply dealers to continue conducting most tests to qualify components before supplying to furniture manufacturers and addresses fire safety of fillings, which constitute a much larger potential fuel load than most fabrics.
- Composite test to predict small, open-flame performance of finished, furniture products.

Summary - Proposed T.B. 117 Changes - Open Flame

- Improved standard for flame-resistance of upholstery fabric.
- Inclusion of dust cover flame test.
- Horizontal small-flame test for natural/synthetic and blended fibers over standard cotton sheeting material.

Summary- Proposed T.B. 117 Changes-Open Flame (2)

- Improved resilient cellular foam test w/ small seat/back mock-up.
- Use of tickings/barriers impervious to flame for <u>all</u> loose fillings (shredded foam, plumage, loose fibers, polystyrene beads, etc.)

Summary- Proposed T.B. 117 Changes-Open Flame (3)

- Composite Seat/Back Mock-Up Test to confirm furniture system performance.

  Test only required when non-complying upholstery fabrics are used in furniture with complying filling materials.

Upholstery Fabric - Open-Flame Test

- To qualify upholstery fabrics, perform open-flame mock-up test over standard FR polyurethane Foam . Fabric suppliers would offer qualified fabrics.
- If manufacturer uses a non-qualified fabric, Composite Test will be required.

Upholstery Fabric Open-Flame Test

- New 117 fabric test identical to CPSC Draft Seating Area Test, except...

1) 117 uses FR foam below sample fabric.

2) Proposed 117 Failure Criteria - greater than 4% fabric/foam weight loss in first 10 minutes of test or rapid propagation within 10 minutes.

Non-Qualified Upholstery Fabric - Options

When non-qualified fabrics are intended for use, Composite Test is required. Options to qualify include

1) barrier below fabric, or

2) better-performing filling materials or,

3) both strategies above.

Barrier Issues-117

- Requiring minimum small-flame performance for all filling components adds safety redundancy and better protection in real-world scenarios where barrier may be compromised.
- Tearing, fraying, wear, deliberate cutting, etc. can compromise safety of furniture, especially if constructed with non-FR fillings.

Comparison -Fabric Tests

- Current T.B. 117 - Offers little or no protection of upholstery fabric from fire involvement.
- New T.B. 117 Fabric Test over standard FR foam will qualify fabrics. Non-qualified fabrics must pass 117 Composite Test with barrier and/or better-performing fillings.

Hazard Associated with Synthetic Fibers

- Synthetic Fibers increase Burn Threat by:
  - 1) Melting away from flame allowing direct ignition of underlying substrate layer (foam, etc.).
  - 2) Melt/wick into fabrics and foams and continue burning (negative interaction).
  - 3) May drip and melt, igniting secondary fuel sources such as carpets, drapes, lampshades, other combustibles in room.

Fiber Test Procedure- Open Flame Resistance

- Melt through of fiber sample is a failure.
- Sample must essentially "char in place".
- Qualified synthetic battings/pads now available in market for furniture and bedding.
- Cellulosic battings/pads (if properly treated) are flame and smolder-resistant.

Polyurethane Foam- New Open Flame Standard

- Applies to all types resilient, cellular foams (polyurethane, latex, neoprene, etc.).
- Under new standard, foams would have to qualify in bare foam seat/back mock-up test, with small flame, using same test frame as fabric component test and composite test.

Loose Fillings - Open Flame Test

- Require all types loose fillings to be encased in ticking withstanding penetration from small open-flame.
- Outer upholstery fabric may substitute for ticking but must pass cushion test with loose fills (must withstand flame penetration).

Furniture Composite Open-Flame Test

- Cornerstone test to predict real-world open-flame performance of furniture.
- Required for upholstery fabrics not qualified in component test.

Rationale for 117 Composite Test

- Composite is better predictor of real-world open-flame hazard of upholstered furniture than component tests alone.
- Predicts interactions between fabric and fill components, especially in early fire stage.
- Improvements in fire performance of filling materials compensates for use of non-complying fabrics and decreases need for flame-retardant backcoating or other fabric treatments/modifications.

Rationale for Composite Test (2)

- Preserves wide range of fabric styles and filling material options by allowing flexibility in construction.
- Allows flame-resistant barriers (fabrics, tickings and interliners) as option to expand the range of usable upholstery fabrics.

Smolder Resistance Tests

- TB 117 retains smolder resistance tests for filling components as currently mandated (w/ modifications).
- Use of barriers should enhance smolder resistance for most furniture systems, except fabrics with extreme smolder propensity.

Future 117 Timetables

- Draft 117 Standard and hood specifications now on Bureau Web Site - www.dca.ca.gov/bhfti.
- Informal comments on TB 117 draft will be received until July 1, 2002.
- Bureau anticipates moving towards final rulemaking beginning Fall, 2002.

Bureau Contacts

- Web Page: www.dca.ca.gov/bhfti
- Pamela S. Rivette, Chief, (916) 574-2157,

  e-mail: Pamela_Rivette@dca.ca.gov
- John McCormack, Manager, Research and Development, (916) 574-2057

  e-mail: John_McCormack@dca.ca.gov
- Said Nurbakhsh, Flammability Research Test Engineer, (916) 574-2064

  e-mail: Said_Nurbakhsh@dca.ca.gov

Bureau Address/Phone/Fax Numbers

- Bureau of Home Furnishing and Thermal Insulation
  3485 Orange Grove Avenue
  North Highlands, CA 95660-5595
- Main Phone Number (916) 574-2041
- Fax Number (916) 574-2449

Statement of
The American Furniture Manufacturers Association
(AFMA)

Before the U.S. Consumer Product Safety Commission

June 18, 2002

Introduction

Good Morning/Afternoon. I want to thank the Commission and staff for the opportunity to participate in today's discussion. I am Andy Counts, the Executive Vice President of the American Furniture Manufacturers Association (AFMA). Because I assumed this position only last January, there are many of you I am meeting for the first time.

By way of introduction, I was trained in Industrial Engineering at Georgia Tech. I worked as an environmental engineer at the Virginia Department of Environmental Quality and with the engineering firm Malcolm Pirnie before coming to AFMA in 1997 as Director and later Vice President of Environmental and Technical Services. One of my goals for the association is to help the industry identify opportunities to advance its already commendable standards for environmental responsibility, workplace safety and product stewardship.

AFMA and UFAC

You will also be hearing testimony today from the Upholstered Furniture Action Council (UFAC), a research and standard-setting organization with a successful track record in reducing the cigarette ignition propensity of residential seating products. UFAC has also provided constructive scientific input into the debate over how to achieve resistance to small open flame sources. Very early in this rulemaking process, UFAC researchers cautioned that the appealingly simple option of chemically treating polyurethane foam cushions did not meaningfully improve fire performance, a finding that was later confirmed by CPSC staff. Later, UFAC participated in test burns which helped refine the agency's test apparatus and procedure. We expect UFAC to continue to serve as a technical resource, both to the industry and the Commission.

AFMA has a broader membership and a broader mission. It includes the afore-mentioned goals of advancing health, safety and product stewardship, as well as minimizing the potential for conflicting state regulations that might complicate national sales programs or undermine economies of scale for our members and suppliers. We are also mindful that public perceptions of the industry shape consumer buying decisions.

Industry Profile

AFMA represents primarily manufacturers of residential furnishings, including upholstered furniture, wood furniture, home office, and decorative accessories such as lamps, rugs and framed art. AFMA member companies account for the great majority of the nation's nearly $23 billion (wholesale) in residential furnishings shipments.

AFMA companies participate in a highly competitive market characterized by ever-changing style preferences, margin pressure from retailers, and the tendency of consumers to postpone big-ticket purchases if their perceptions of value and function are not met.

Compared to most U.S. manufacturing facilities, furniture plants are fairly small. Almost 86 percent of facilities employ less than 50 workers, and 40 percent employ less than four. Many upholstered furniture plants outsource wood frames, spring systems, textiles and cushioning, and function essentially as assembly operations. Very few have full-time environmental, workplace health, or product safety specialists, and virtually none have flammability testing labs. In contrast, the vendors who supply our companies with these components tend to be larger companies with testing capabilities and specialized knowledge about their products.

The characteristics of our member companies and the market they operate in don't preclude improvements in environment, health and safety. To the contrary, AFMA and its member companies have achieved a number of milestones, including the largest percentage reduction in chemical emissions of any industry in the United States during the years 1995-2000, a Lost Workday Injury and Illness (LWDII) rate for member companies of only 1.1 percent (a 45 percent reduction over the last decade) and the receipt of the CPSC's Chairman's Commendation for Product Safety.

The nature of our industry does shape the *way* in which we pursue these goals. What works in our industry are: (1) a clear delineation by policymakers of the risks to be addressed; and (2) the development of cost-effective, compliant components by our suppliers.

This was the model for a complex negotiated rulemaking under the federal *Clean Air Act* which resulted in enormous reductions in evaporative air emissions from the wood finishing process. Straightforward changes in our manufacturing process, combined with redesigned paints, coatings, glues and application equipment from our suppliers has so far yielded a 73 percent reduction in these emissions, substantially more than regulators and environmental interests originally sought. Then-EPA Administrator Carol Browner called this achievement "a credit to industry-environmental-government cooperation."

The Nature of Small Open Flame Risks

Let me discuss the pending CPSC rulemaking in relation to this template for success. First, the nature of the risk represented by small open flame ignition of upholstered furniture is better understood by stakeholders now than at early stages of the rulemaking. In past years, there was a tendency to single out individual components for regulatory attention. The 1993 petition of the National Association of State Fire Marshals (NASFM) identified polyurethane foam as the most significant potential fuel source. However, subsequent testing demonstrated that modification of foam does not by itself meaningfully improve open flame performance. In its 1997 Briefing Package, CPSC staff originally relied solely on fire retardant (FR) treatment of outer fabrics, reasoning that minimizing ignition at the outset avoided the complexities and expense of measuring progressive involvement of other components. However, evidence about the

variability in performance of some treated fabrics, along with concerns about consumer acceptance and FR toxicity, led the agency to provide an alternative compliance option involving fire-blocking interliners.

At present, most stakeholders recognize that small open flame fires represent a synergy between fabric, polyurethane foam and other cushioning materials. Further, there seems to be agreement that, in many circumstances, modification or isolation of one or more components can reduce the propensity of the assembly to ignite or propagate. I say "in many circumstances" because most participants in this process now accept that no standard will be foolproof; no small-scale test will fully model the complexities of actual residential fires; and, no engineering changes will withstand the sometimes purposeful behavior of unsupervised children intent on starting a fire.

The acceptance of the unavoidable complexities and shortcomings of a small open flame standard for upholstery, perhaps opens the door for meaningful progress. If the goal is no longer flame-proof furniture, but furniture which our best evidence from the laboratory suggests will ignite less readily and burn more slowly, perhaps we can get there together. If the perfect is no longer the enemy of the good, let's consider the proposal which CPSC staff has generated and discuss how it might be improved.

The Interliner Option

In 2001, CPSC staff proposed an alternative compliance option allowing furniture manufacturers to construct product which incorporates qualified barrier materials, either cloth or batting. The goal of such constructions is not primarily to reduce ignition of the outer fabric, but to limit the progression of fires into internal components such as polyurethane foam. Barriers would be qualified using a "Crib 5" ignition source, meant to model the effect of burning outer fabric.

Depending on the type of furniture product, and the demands of particular consumers, the interliner option may provide significant advantages:

- It would minimize the burden of sampling, testing and record by the nation's thousands of furniture manufacturers, as they could generally rely upon the certification of a barrier supplier that the barrier is compliant. The current CPSC proposal requires no further testing provided a qualifying barrier is used.

- It would preserve fabric choice by allowing the use of outer fabrics which cannot be reliably FR treated, and those for which treatment would compromise function or consumer appeal. This option would also deal more sensibly with limited run fabrics and COM's, for which valuable quantities of fabric would otherwise be consumed by testing.

- Furniture manufacturers and consumers especially concerned about chemical content would have access to flame resistant product which contains no chemical flame retardants. This could be advantageous in markets where

consumer preference, labeling initiatives or regulations discourage the use of flame retardants.

For those fabrics that can successfully and acceptably be FR treated, the draft standard would still allow the use of the 20-second seating area test. This would address situations where use of a barrier material would be impractical or disproportionately costly.

Given the advantages of constructions utilizing interliners, we believe the stakeholders should work together to make this option viable for as broad a segment of the market as possible. We have several recommendations in this regard.

- Identify opportunities to **minimize labor costs.** A true "double upholstering" of interliner fabric could inflate costs unnecessarily, as upholsterers are among the most highly trained and best paid employees in our plants. The CPSC project manager has indicated no strong preference for sewing of barriers and said that the agency could allow any reliable method of attachment. We will be consulting with our suppliers about staples, glues and other less labor-intensive approaches that will preserve the fire-resistant function of barrier fabrics.

  The agency has also made clear that battings as well as fabrics could qualify as barriers. Because cotton and polyester batting are already widely used for comfort and aesthetic reasons, such materials could be installed with less additional labor. It is critical, however, that flame-resistant substitutes be commercially available for both cotton and polyester battings, We have seen several materials that appear to be functional equivalents for cotton batting, but have yet to see first-hand barriers with the softness and resilience of existing polyester batting.

- In a further effort to qualify the widest range of acceptable barrier materials, the stakeholders should assess the ***appropriateness of the* crib 5 ignition test** proposed by CPSC. The crib 5 test is a relatively severe test which British authorities reportedly chose in order to simulate arson incidents. With an estimated heat release of 15 kw, it is only slightly less severe than the TB-133 test required for furnishings in public occupancies in California, and this heat—and the weight of the burning crib--is concentrated in a small area of the interliner. If CPSC's goal is to model the effect of burning outer fabric, a crib 5 may not be the right choice. We understand that CPSC staff is conducting tests on this point and stakeholders will certainly be eager to see their findings.

- The performance of barriers is influenced to some extent by the performance of substrate materials. In furniture constructions, this will

often be polyurethane foam. The stakeholders may wish to consider the incorporation into the CPSC approach the use of **FR foam**. We are aware that CPSC testing has not revealed dramatic improvements in fire performance attributable to combustion-modified foam. However, in combination with the other contemplated changes, FR foams could play a constructive role. We are aware of small-scale tests where the performance of interliners appeared to be compromised by melting or smoldering foam underneath. One possibility is that interliners which show passing results over FR foam could be certified for use only over such foam. We are interested in the views of the other stakeholders on these issues.

Ensuring the Availability of Complying Materials

As you can see, in order to meet any flammability regulation, the furniture industry would be relying a great deal on its suppliers. Up to this point, there has not been a great deal of specific information made available about the performance, cost, availability and chemical properties of flame resistant components. We can certainly understand the desire of suppliers to protect proprietary technologies and business strategies, and the reluctance to commit resources to the research, development and commercialization of products that would likely not find a market in the absence of a regulation. At the same time, the furniture industry is not eager to embrace a regulatory scheme without knowing that affordable, non-toxic materials will be available in sufficient variety and scale. We have reached a stage where further progress on upholstered furniture flammability may depend on this chicken-and-egg problem being successfully resolved.

We do not have all the answers on this point. We welcome the call by NASFM for a new technologies showcase in California. We also encourage component producers to meet with their customers. Recognize that the greater comfort level your customers have with present and emerging compliance options, the greater will be their willingness to support a regulatory solution. CPSC can assist by setting an effective date for any regulation that allows suppliers adequate time to digest the standard, and to commercialize and ramp up production of compliant materials. During this period, the various associations would certainly have a role to play in educating members regarding best practices based on the latest flammability testing and toxicity data. Given these necessary activities, an effective date of at least 36 months from publication of any rule appears warranted.

Thank you once again for the opportunity to present our thoughts. I look forward to a continued dialogue with the Commission and with the other stakeholders.

STATEMENT

OF

JOSEPH ZIOLKOWSKI

EXECUTIVE DIRECTOR
UPHOLSTERED FURNITURE ACTION COUNCIL

BEFORE THE

U. S. CONSUMER PRODUCT SAFETY COMMISSION

Public Meeting on Upholstered Furniture
Bethesda, Maryland
June 18 & 19, 2002

Good morning. Thank you for this opportunity to meet with the CPSC today about the options for addressing upholstered furniture flammability. Ed Gerken, the Chairman of the Upholstered Furniture Action Council (UFAC) is out of the country and is not able to talk with you today on this very important subject. He asked me to provide you with UFAC's comments in my capacity as the organization's Executive Director. As many of you know, I am Joe Ziolkowski and, prior to my retirement last year, I also served as the Vice President of Technical Services at the American Furniture Manufacturers Association (AFMA).

UFAC carefully reviewed the staff briefing package of October 2001 and welcomed the staff recommendation for this public meeting. It is now time for a frank and candid exchange of ideas if, further progress on a standard is to be made--something most parties in this proceeding want to achieve. There is no doubt that all of the participants have joined in this process with the best of intentions, namely to provide greater protection to consumers, their children, and firefighters.

Initially there was some disagreement on what level of safety upholstered furniture needed to provide and how it was to be achieved. It now appears

that there has emerged a general consensus on a number of key elements essential to the success of any upholstered furniture flammability standard, namely that it must be effective and practical.

As AFMA has indicated in its comments, the furniture industry responds best when the objectives are clearly defined. The UFAC experience in making upholstered furniture safer by addressing smoldering ignition certainly proved that to be true. Unfortunately, we regret that the ultimate objective of this rulemaking has never been clearly articulated by the agency. Neither safe nor safer upholstered furniture has ever been defined with respect to small open flame ignition of upholstered furniture.

Does safe or safer upholstered furniture mean no ignition is allowed?

Does safe or safer upholstered furniture mean that flashover does not occur?

Does safe or safer upholstered furniture mean that the spread of the fire is slowed, thereby allowing people in their homes more time to exit?

Does safe or safer upholstered furniture mean small open flame ignition resistance takes precedence over smoldering ignition resistance?

This lack of a clear objective has complicated the efforts of interested parties such as UFAC to assist the agency in substantive ways. Initially, it seemed to us that CPSC's goal was to prevent ignition of the cover fabric. Substantial resources were devoted to research to determine if this was a feasible goal, rather than to research and development of new technologies that would minimize the spread of the fire once ignited. The latest staff briefing package would indicate that the agency has moved away from "no ignition" towards an approach more akin to slowing the progression of the fire and thereby allowing more time for people to safely exit their homes.

Before this rulemaking proceeds to the next step, the agency should clearly define what constitutes "safe or safer furniture". We urge the staff to consider the approach that UFAC adopted in its Mission Statement in 2000. UFAC stated that upholstered furniture can be made more resistant to ignition from small open flame and smoldering cigarette sources, and recognized that presently a "fire-proof" upholstery product simply is not a realistic or practical goal.

Practicality seems to be the common thread linking all the interested parties together today. We believe that the term "practical" encompasses UFAC's notion of a standard that is safe, effective, and saleable. These criteria coincide with the agency's statutory responsibility for promulgating a standard under the Flammable Fabrics Act that is reasonable, practicable and appropriate. If those criteria are satisfied, then UFAC is confident that the resulting standard will not be overly burdensome for manufacturers, compliance will be straightforward, and consumers will be likely to purchase safer upholstered furniture products. Unfortunately, neither the CPSC staff draft standard nor the proposal of the California Bureau of Home Furnishings to amend Technical Bulletin (TB) 117 satisfies such criteria for a standard; although the CPSC staff draft standard appears to be moving in that direction.

We have a concern with the CPSC draft standard's heavy reliance on fire retardant (FR) chemicals to achieve ignition resistance. At this time, that approach does not meet our criteria of being safe, in other words, that it must not introduce new risks to consumers, workers or the environment nor undermine the existing level of resistance to cigarette ignition.

We recognize that some believe that the July 2000 Report of the National Research Council (NRC)[1] study on FR chemicals is sufficient to allow the safe use of these chemicals on upholstery fabrics. To reach such a conclusion represents an unjustified leap of faith because the NRC study was very limited in duration and scope. It did not resolve many of the larger questions surrounding FR chemicals, including the impact of these chemicals in the environment and in the workplace.

True, the NRC study did suggest a "clean bill of health" for eight of the sixteen FR chemicals thought to be appropriate for use in treating upholstery fabrics. One of the most important FR chemicals that **did not** get a clean bill of health was antimony trioxide. This FR chemical was used extensively in the FR fabric backcoatings for a CPSC study of twenty-seven BS 5852-compliant chairs.[2] We are told that the organic flame-retardants do not perform effectively in fabric backcoatings without the use of antimony trioxide.[3] The most commonly used FR systems for backcoating upholstery fabrics in the U.S. and in Great Britain are combinations of brominated FR

[1] This report is frequently referred to as the NAS study.
[2] U.S. CPSC, Briefing Package on Upholstered Furniture Flammability: Regulatory Options, October 30, 2001 at page 271.
[3] Dr. Robert Barker and Dr. Philip J. Wakelyn, "How Fire Retardant Chemicals Prevent Flaming and Smoldering Combustion", submitted under cover letter dated August 23, 2000 from Patty K. Adair, at page 4.

chemicals and antimony trioxide. Hence our concern is with the potential toxicity of these materials.

The European Community (EC) is continuing to restrict the use of many FR chemicals because studies show that traces are indeed staying in the environment, and even appear in mother's milk. The EC is targeting the impact of these FR chemicals in the workplace and in the environment, areas not covered by the NRC study.

The U.S. Environmental Protection Agency (EPA) does not seem to be focusing on the environmental impact of these FR chemicals. It is our understanding that EPA is not interested in pursuing Significant New Use Rules (SNUR) for these chemicals at this time, although that may be changing due to the reported interest of the First Lady in this subject.[4] Besides, publishing a SNUR after a safety standard is logically flawed. Information about environmental effects should be known prior to these chemicals being effectively mandated on such a large scale.

[4] "The Uses of Influence from the Ultimate Insider", NEWSWEEK, May 27, 2002, p. 8.

UFAC has consistently raised these concerns because the ultimate moral and legal responsibility for any adverse health effects to humans or to the environment from any of these FR chemicals will fall on furniture manufacturers. If mandated by the agency, it would be UFAC's strong recommendation to the furniture industry that they consider seeking legislative action that would provide indemnification for those small businesses and those manufacturing at low price points, whose only economically practical avenue of compliance would be to rely upon FR backcoatings.

We are also concerned that FR backcoatings are not practical for many cellulosic fabrics and fabric blends containing high cellulosic yarn content. FR backcoating these fabrics can increase their cigarette ignition propensity. Clearly this is a counter-intuitive result and not acceptable. UFAC does not believe that small open flame resistance should take precedence over smoldering ignition resistance because fire statistics demonstrate that cigarette ignition is a much larger problem than small open flame ignition of upholstered furniture. More research needs to be conducted to prevent this result.

Moreover, quality control in applying the proper amount of FR chemicals to achieve the correct level of resistance remains difficult to maintain. We know that the Commission is aware of the immense quality control problems associated with FR fabric treatment in Great Britain. With fourteen years of experience in applying FR backcoatings, the process in Great Britain is still rife with trial and error and is lacking in acceptable quality control measures. Double and triple coating are still very common. This results in very stiff or "boardy" fabric which most American consumers do not find acceptable. This does not meet either the effective or the "saleable" criteria of UFAC nor does it meet the demands of the U. S. marketplace.

Finally, the durability of FR treatment throughout the life of the upholstery product remains unknown. To date, we do not know all the factors that influence the durability of FR backcoatings. As upholsterers, we see constant evidence of severe backcoating deterioration. We are unaware of sound scientific studies on this subject that answers the question of the durability of FR backcoatings.

Notwithstanding our stated concerns, FR chemical treatments may become an attractive solution. UFAC is willing to work with the FR chemical

industry to develop ways to make the use of FR chemicals on upholstery products safe. If more information were made available about these chemicals, our concerns might be alleviated. At least, more information would focus our attention on targets for more research.

UFAC's primary concern with the California proposal to revise TB 117 is its reliance on emerging technologies and on unproven test methods. It does not satisfy our criteria of being effective and saleable. UFAC considers an effective standard to be one that actually reduces the number of residential fires involving upholstered furniture and thereby does not create a false sense of security in the consumer. To be saleable, a standard must result in furniture that is attractive comfortable, durable and affordable.

Emerging technologies, such as cited by the California proposal, are problematic because they have not been made on a commercial basis and therefore availability is questionable, cost is unknown, and performance in the field unexplored. Unproven test methods, such as cited by the California proposal, are problematic because they bear no correlation to the fire performance of full-scale furniture. CPSC's own finding with respect to the British standard, BS 5852, makes this point well. After studying the British

standard, CPSC concluded that there was no significant correlation between small open flame and smoldering ignition test results with full-scale upholstery furniture.[5] Given its reliance on technologies that have yet to be proven in the marketplace, we doubt that the California proposal, if adopted as drafted, could result in either an effective standard or an upholstery product that is saleable.

For any upholstered furniture flammability standard to be effective at least two things must be considered. Bench scale composite tests should be developed that accurately, consistently, and reproducibly predict the behavior of burning furniture. Then component tests should be developed that would relate to the composite tests.

For any upholstered furniture flammability standard to result in a saleable product, cost must be considered. Developing a standard requiring a safer upholstery product that will sell at a reasonable price in the global marketplace should be our goal. The statistics of residential fires have told us repeatedly over the years that the residential fire problem in the United States primarily lies in households with lower incomes, less education, and a

[5] U.S. CPSC, Briefing Package on Upholstered Furniture Flammability: Regulatory Options, October 30, 2001, at page 24.

higher proportion of single parents. This segment of the population is the most sensitive to cost increases, yet this segment is clearly the most in need of the protection that safer upholstery will provide. The challenge for all of us is to agree on a standard that will provide an acceptable level of fire protection at price points that will primarily benefit them and the firefighters charged with saving their lives.

UFAC is pleased that the CPSC staff draft standard would allow for the use of interliners as an alternative compliance option, because we believe that this is an approach that holds the most promise for eventually meeting our criteria for an effective standard. Fire-blocking interliners could slow the progression of the flame, could prevent flashover, and could provide for more egress time in the event of a fire. Interliners could meet our criteria of safe because they would permit furniture manufacturers and fabric manufacturers to avoid the use of FR chemicals. Interliners could meet our criteria of effective if more research work was done to develop a variety of interliners that would work with a combination of fabrics and foams. Interliners could meet our criteria of saleable if more work was done to develop a variety of interliners at lower price points than currently available.

AFMA has already suggested that CPSC reconsider the Crib 5 ignition source and look at a less severe ignition source that would better simulate a variety of burning fabrics. Should the agency consider this, we are confident that a smaller ignition source for barriers could lead to products that would be much more practical and economical, yet still provide for adequate margins of safety for consumers and their children.

Indeed, UFAC would like to recommend a new approach and process for this rulemaking. Up until now, the process and the approach have been opaque. Various parties have been working behind closed doors with no opportunity for a real exchange of expertise. We hear rumors and whispers that there are new technologies under development, but concrete details are few. We understand that, in many instances, the various legal restrictions such as Section 6(b) of the CPSA and antitrust regulations have prevented the sharing of information and data. At this point, however, most interested parties seem to agree on the need for a mandatory flammability standard and agree that this standard needs to be practical and effective. Given the momentum on this project, it would seem appropriate that the goal of the rulemaking be clearly defined and that the process be opened up to become more transparent. UFAC would like to recommend that all interested parties

consider a joint industry – government research effort, approved by the Department of Justice and/or the Federal Trade Commission, to pursue some basic research work. We envision that this group could define the objective and develop quantitative procedures to meet the objective. Then the group could work to develop materials that fit within the procedures and make certain that new or different products are available in commercial quantities. Such a joint venture should address some of the legal constraints that have hampered efforts to date to develop a standard that would be safe, effective and saleable.

After 30 some years of struggling to address the upholstered furniture flammability issue, UFAC wants to resolve this issue, once and for all. But it wants to resolve it with a standard that is meaningful so that American consumers and their families can be assured a certain level of fire protection from their upholstered furniture pieces at a reasonable price. Throughout my career, it has been my experience that flammability issues are the most complex to address from a technical point of view. But because they are complex does not mean that they cannot be addressed. There are simply no quick fixes and no "silver-bullets". Anyone, who suggests that there are, is simply unintentionally distracting attention from the real issues.

CPSC's work in the area of upholstered furniture flammability has advanced the state of knowledge concerning furniture flammability. It provides the rest of us with a framework within which to focus our efforts. That is why UFAC is calling for a different approach and process as we enter the next stage in the rulemaking process.

It is time for all interested parties to join forces and expertise to develop a standard that should further reduce the flammability of upholstered furniture. That, in turn, should go a long way in reducing the residential fire problem in America. Upholstered furniture fires from cigarette ignition have significantly declined over the past twenty-three years. The risk of a fatality from a small open flame ignited upholstered furniture fire is miniscule by comparison—less than 2 fatalities per 10 million persons. Regardless, every death is a tragedy that technical experts and policy makers rightly should strive to prevent. And we are willing to partner with any reasonable individual or any reasonable group to achieve this objective.

Joseph Ziolkowski

Joseph Ziolkowski graduated from the Philadelphia College of Textiles. During 20 years at Burlington Industries and 20 years at UFAC, he has participated in the development of voluntary and mandatory flammability standards in the aviation and automotive industries, as well as standards for consumer products such as rugs, sleepwear, mattresses and, of course, upholstered furniture. This was accomplished working through the American Society of Testing Materials (ASTM), the National Fire Protection Association (NFPA), Underwriters Laboratories (UL) and the U. S. Consumer Product Safety Commission (CPSC).

Background of The Upholstered Furniture Action Council (UFAC)

UFAC is a non-profit, voluntary industry association. It was created by furniture suppliers, manufacturers, and retailers in the 1970's to reduce the likelihood of cigarette ignition of upholstered furniture. Smoldering cigarettes account for the vast majority of residential fires involving upholstered furniture.

Upholstered furniture fires represent a relatively small fraction of all residential fires. This small fraction is particularly noteworthy because there are 101 million households[1] in our country, with an estimated 645 million upholstered furniture products[2] in those homes.

Furniture manufacturers, suppliers and retailers voluntarily stepped forward to address the issue of cigarette ignition of upholstered furniture in American homes in a proactive manner. Throughout the years, UFAC has considered the issue of small open flame ignition of upholstered furniture, but has never found an approach that was effective. In cooperation with the U. S. Consumer Product Safety Commission (CPSC), the National Bureau of Standards (now NIST), the National Fire Protection Association (NFPA), and other authorities, UFAC developed voluntary construction criteria to improve the cigarette ignition resistance of upholstered furniture.

The UFAC construction criteria apply to component materials used in upholstered furniture construction, including fabrics, welt cords, decking substrates, filling materials,

---

1 U.S. Department of Commerce, *Statistical Abstract of the United States* (1998).

2 W.J. Epperson, Mann, Armistead & Epperson, publishers of Furnishings Digest..

interior fabrics, decorative trims and edging and barriers. To be in compliance with the UFAC construction criteria, these materials must pass specified test methods which are designed to minimize cigarette ignition of upholstered furniture.

The UFAC program also includes an information and education campaign consisting of hangtags and public service announcements. The multilingual UFAC hangtags are attached by manufacturers to the millions of new upholstered furniture products that are made in accordance with UFAC's construction criteria each year. The UFAC hangtag warns purchasers and users alike that upholstery fires are possible, will burn rapidly, and may emit toxic gasses. Further, the hangtag encourages purchasers and users to use smoke detectors and to practice safe smoking habits.

The UFAC hangtag's common sense consumer safety message is further enhanced by the dissemination of Spanish and English public service announcements in every media market in the United States. During one recent yearly period, UFAC's newspaper messages had a readership of approximately 126 million people. In another example, UFAC reached a radio audience of approximately 118 million people.

We know that the UFAC program has been effective. Since the implementation of UFAC's voluntary construction criteria in 1978, upholstered furniture fires caused by cigarette ignition have declined by approximately 79% according to the CPSC's latest available data in 1996. Fire authorities, including the CPSC, have stated that UFAC's role was central to this success.[3] The CPSC fire-safety team noted:

> *Credit is certainly due to UFAC for its successful efforts to reduce fire deaths associated with furniture. They have eliminated the use of non fire retardant treated cotton batting in upholstered furniture, required heat conducting welt cords, and accelerated the use of thermoplastic fibers in*

---

[3] Dale Ray, CPSC Upholstered Furniture Flammability Project Manager, Staff Briefing of CPSC Commissioners, December 18, 1997, p 6.

upholstery fabrics, all of which have provided significant increases in the cigarette ignition resistance of upholstered furniture.[4]

CPSC data during the same 1978-1996 period also shows that total residential fires have declined 41.4%, but it should also be noted that all upholstered furniture fires have decreased by 69.5%, half-again as much.

As further evidence of UFAC's effectiveness, in 1997, the CPSC published its finding that 92% of individual cigarettes placed on newly manufactured upholstered chairs did **not** ignite the chairs.[5] Additionally, CPSC found that at least 90% of the dollar volume of upholstered furniture conformed to UFAC voluntary construction criteria.[6] Each of these figures reflects substantial improvement from the levels observed by earlier CPSC evaluations in 1980 and 1984.[7]

The UFAC construction criteria have been adopted by the National Fire Protection Association and the American Society for Testing Materials. Internationally, the UFAC approach has been adopted by the Canadian, European, and Mexican standard setting organizations.

---

4 Sharman, L. J. and Hoebel, J.F., Memorandum to Thomas W. Murr, October 26, 1989.

5 U.S. CPSC, Regulatory Options Briefing Package on Upholstered Furniture Flammability, October 28, 1997, p.3.

6 Ibid., p. 7

7 Ibid., p.65